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EXAMINER

COLIN, CARL G

ART UNIT	PAPER NUMBER
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2136

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 09/846,522	Applicant(s) NAKANO ET AL.	
	Examiner Carl Colin	Art Unit 2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. In response to communications filed on 10/26/2006, the following claims 1-23 are presented for examination.
2. Applicant's arguments, pages 2-4, filed on 10/26/2006, with respect to the rejection of claims 1-23 have been fully considered, but they are not persuasive. Applicant's response does not show an additional authentication request is sent from the information processing apparatus, applicant, on the other hand, points to fig. 7 stating a determination is made for a second authentication request. Applicant's response also fails to show that the additional request (second request) is from the information processing apparatus and is sent only if the decrypted result corresponds to the first data item. Applicant mentions that the specification page 3, lines 22-25 states "only when the user has been authenticated performing processing...", but the specification does not state "only when the user has been authenticated sending the additional request from the information processing apparatus" nor "only if the decrypted result corresponds to the first data item sending the additional authentication request from the information processing apparatus" as claimed. The claim further recites "only when the user has been authenticated in response to the additional authentication request the information apparatus the authentication apparatus performs processing using the private key corresponding to the user for making the information processing apparatus authenticate the user", it is noted that the information processing apparatus does not authenticate the user twice according to the

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specification. None of the limitations with respect to the additional authentication request is supported by the specification. As mentioned previously, in the last Office Action, Applicant's disclosure does not even disclose comparing the decrypted result with a first data item (see specification page 10, lines 8-12). In view of the above, applicant has not overcome the 112th rejection first paragraph. In response to Applicant's argument that Audebert is not directed towards using a common key system for a first authentication and using the private key to further authenticate the user and using the private key for further data encryption, these features are not recited in the claims. The claims recite "only when the user has been authenticated in response to the additional authentication request the information apparatus the authentication apparatus performs processing using the private key corresponding to the user for making the information processing apparatus authenticate the user" Audebert discloses a first authentication using a PIN (which meets the common key authentication), (column 21, lines 39-57) but also discloses this authentication can be effected using common-key encryption or public key encryption (see column 26, lines 37-45). Audebert further discloses authentication using common-key encryption (see column 22, lines 4-7) and only when the user has been authenticated in response to the additional authentication request, another encryption method using public key as the signed transaction is signed with a private key and sends to the server (see column 22, lines 8-11); it is implicit that the server will decrypt the transaction with a public key as known in the art (see column 12, lines 26-35). Therefore, processing is performed with a private key for making the server authenticate the user since only the user can possess the private key. Contrarily to applicant's arguments, Audebert discloses the claimed limitation as claimed. Claims 1-23 are still rendered obvious in view of Audebert and remain rejected.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3.1 Claims 1, 5, 13, 14, 21, 22, and 23 and the intervening claims are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant's disclosure fails to recite "an additional authentication request sent from the information processing apparatus and wherein the additional authentication request is sent only if the decrypted result corresponds to the first data item, and wherein, only when the user has been authenticated in response to the additional authentication request, the authentication apparatus performs processing as recited in the independent claims 1, 21, and 23. The specification, on the other hand, does not describe an additional authentication request from the information processing apparatus (server 3) nor the additional authentication request is sent only if the decrypted result corresponds to the first data item. None of the limitations with respect to the additional authentication request is supported by the specification. Therefore, the specification does not describe the steps above as claimed.

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Claims 13, 14, and 22 recite similar limitations. As mentioned above, there is no description of an additional authentication request from the information processing apparatus (server 3).

Claims 1, 5, 13, 14, 21, 22, and 23 also recite comparing the decrypted result with the first data item, which is not disclosed in the disclosure. The specification merely states when the decryption is successfully performed, it is determined the legitimate user has requested the electronic priced information (page 10, lines 10-12).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,694,436 to **Audebert**.

As per claim 1, **Audebert** substantially discloses a user authentication system, comprising: an integrated circuit card that meets the recitation of a data holding medium for

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holding a common key unique to a user, used in a common-key encryption method, for example (see column 21, lines 17-21); for authentication between the data holding medium held by the user and a terminal module that meets the recitation of authentication apparatus (see column 26, lines 38-42); said authentication apparatus for holding the common key used in the common key encryption method and a private key corresponding to the user used in a public-key encryption method, for example (see column 21, line 45 through column 22, line 20); for authentication between the data holding medium and a server or PC to perform a service to the user (see column 11, lines 10-29; column 12, lines 56-69 and column 24, lines 39-61); an information processing apparatus connected to the authentication apparatus in an always-communicable manner and provided with a function for performing authentication by the public-key encryption method, for example (see column 11, lines 10-29; column 12, lines 42-69 and column 24, lines 39-61); wherein said authentication apparatus is configured to receive a first data item, wherein the first data item is associated with a first authentication request from said information processing apparatus and wherein said authentication apparatus is configured to authenticate the data holding medium by using the common key in response to the first authentication request (see column 21, lines 28-38); wherein said authentication apparatus is further configured to encrypt only if the data holding medium is authenticated in response to the first authentication request, the first data item using the private key associated with the user and to send the encrypted first data item to the information processing apparatus (see column 21, line 50 through column 22, line 20); wherein said information processing apparatus is configured to decrypt the encrypted first data item using a public key associated with the user and to compare the decrypted result with the first data item (see column 22, lines 7-20); **Audebert** discloses that the authentication of

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the data holding medium can be performed using PIN, challenge/response or asymmetrical algorithm (see column 26, lines 25-45); wherein the authentication apparatus performs authentication, authenticating the data holding medium by using the common key used in the common key encryption method for the user held by the data holding medium, in response to an additional authentication request sent from the information processing apparatus, wherein the additional authentication request is sent only if the decrypted result corresponds to the first data item (see column 21, line 59 through column 22, line 20); and, only when the user has been authenticated, in response to the additional authentication request the authentication apparatus performs processing using the private key corresponding to the user for making the information processing apparatus authenticate the user for example (see column 21, line 45 through column 22, line 20). **Audebert** discloses the authentication apparatus has means for authenticating the source and integrity of data received from the sender and further discloses using public-key encryption for secure communication (see column 23, lines 55 through column 24, line 22 and column 24, lines 23-64) that meets the recitation of wherein information encrypted by the public-key encryption method is sent from the information processing apparatus, forwarded to the authentication apparatus, decrypted using the private key corresponding to the user, so as to obtain decrypted information (see also column 21, lines 10-27 and lines 40-45 and column 25, lines 37-45); and discloses common key encryption method between the holding medium and the authentication apparatus that meets the recitation of wherein the decrypted information is encrypted means using the common key and wherein the obtained common key encrypted information is sent back to the data holding medium (see column 24, lines 40-45). **Audebert** discloses a secure downloading in another embodiment wherein authentication apparatus

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performing processing using the private key corresponding to the user, this process of loading is performed upon assuring the integrity of the source and the user that requires an additional authentication request (see column 23, line 25 through column 24, line 38). **Audebert** clearly discloses the scope of the claimed invention as claimed and further suggests encrypting all data exchange between the modules (see column 24, lines 55-61) and further states encryption and signature mechanisms may be performed by any cryptographic techniques as known in the art (see column 12, lines 26-35). Although the steps are not explicitly disclosed with the exact orders as claimed, it would only require routine skill in the art to write the steps of the claimed invention using the encryption and authentication methods exchanged between the authentication apparatus, the holding medium, and information processing apparatus and the suggestions disclosed by **Audebert**. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have information processing apparatus encrypting data and forwarding it for verification to the authentication apparatus since **Audebert** suggests that the holding medium does not have the cryptographic capabilities for signature, that the authentication apparatus contains (column 21, lines 10-26) and if data is verified sending it to the holding medium as suggested by **Audebert** (columns 23-24). One of ordinary skill in the art would have been motivated to do so as suggested by **Audebert** in order to perform a secure downloading of information into the medium that includes mutual authentication of all the modules involved (see column 23, lines 1-27).

As per claims 2 and 6, **Audebert** discloses a user who carries an integrated circuit card that meets the recitation of a data holding medium that is portable (see column 21, lines 17-21).

As per claims 3, 9, and 19, **Audebert** discloses the limitation of wherein the information processing apparatus is a mobile communication apparatus, for example (see column 27, lines 5-18).

As per claims 4, 8, and 18, **Audebert** discloses wherein the data holding medium and the information processing apparatus are integrated as one unit (see column 11, lines 30-33).

As per claim 7, **Audebert** discloses wherein the user authentication request is sent from an information processing apparatus (see column 12, lines 47-55 and column 13, lines 45-46).

As per claim 5, **Audebert** substantially discloses a user authentication method for a user who carries an integrated circuit card that meets the recitation of a data holding medium for holding a common key unique to a user, used in a common-key encryption method, for example (see column 21, lines 17-21); for authentication between the data holding medium held by the user and a terminal module that meets the recitation of authentication apparatus (see column 26, lines 38-42) and a private key used in a public-key encryption method to the authentication between the data holding medium and a server or PC to perform a service to the user (see column 11, lines 10-29; column 12, lines 56-69 and column 24, lines 39-61); a method comprising: authenticating a data holding medium of a user by the common key encryption method using the common key held by the data holding apparatus in response to an authentication request from the server (see column 13, lines 43-60 and column 26, lines 25-45); receiving a first data item

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wherein the first data item is associated with the authentication request from the server (see column 26, lines 25-45); and performing only when the data holding apparatus of the user has been authenticated processing for authenticating the data holding apparatus of the user by a public-key encryption method (see column 26, lines 25-45 and column 21, line 45 through column 22, line 20); receiving a second data item, wherein the second data item is encrypted by the server using the public-key of the user: decrypting the second data item using the private-key of the user; encrypting the decrypted second data item using the common key: and sending the result of encrypting the decrypted second data item to the data holding apparatus (see column 21, line 45 through column 22, line 20); and see also another embodiment in columns 23-24).

Although the steps are not explicitly disclosed with the exact orders as claimed, it would only require routine skill in the art to write the steps of the claimed invention using the encryption and authentication methods exchanged between the authentication apparatus, the holding medium, and information processing apparatus and the suggestions disclosed by **Audebert**. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have information processing apparatus encrypting data and forwarding it for verification to the authentication apparatus since **Audebert** suggests that the holding medium does not have the cryptographic capabilities for signature, that the authentication apparatus contains (column 21, lines 10-26) and if data is verified sending it to the holding medium as suggested by **Audebert** (columns 23-24). One of ordinary skill in the art would have been motivated to do so as suggested by **Audebert** in order to perform a secure downloading of information into the medium that includes mutual authentication of all the modules involved (see column 23, lines 1-27).

As per claims 10-11 and 16, **Audebert** discloses wherein the data holding apparatus is an IC card (see column 21, lines 17-21).

As per claim 12, **Audebert** discloses wherein the information processing apparatus has a communication function, a browser function for accessing information on the Internet and a reader and writer function for reading and writing the IC card (see column 12, line 56 through column 13, line 11).

As per claim 13, **Audebert** substantially discloses a user authentication method for a user who carries an integrated circuit card that meets the recitation of a data holding medium for holding a common key unique to a user, used in a common-key encryption method, for example (see column 21, lines 17-21); for authentication between the data holding medium held by the user and a terminal module that meets the recitation of authentication apparatus (see column 26, lines 38-42) and a private key used in a public-key encryption method to the authentication between the data holding medium and a server or PC to perform a service to the user (see column 11, lines 10-29; column 12, lines 56-69 and column 24, lines 39-61); receiving a first data item wherein the first data item is associated with the authentication request from the server (see column 26, lines 25-45); and performing only when the data holding apparatus of the user has been authenticated in response to the first authentication request processing for authenticating the data holding apparatus of the user by a public-key encryption methods wherein the processing includes encrypting the first data item using a private-key of the user and sending the

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encrypted first data item to the server, wherein the server decrypts the encrypted first data item using a public-key of the user and compares the decryption result with the first data item:

processing for authenticating the data holding apparatus of the user by a public-key encryption method (see column 13, lines 43-60 and column 21, line 45 through column 22, line 20);

Audebert discloses that the authentication of the data holding medium can be performed using asymmetrical algorithm (see column 26, lines 25-45); authenticating in response to an additional authentication request sent from the information processing apparatus, the data holding apparatus by using the common key used in the common key encryption method for the user (see column 21, line 59 through column 22, line 20); and, only when the user has been authenticated, in response to the additional authentication request the authentication apparatus performs processing using the private key corresponding to the user for making the information processing apparatus authenticate the user for example (see column 21, line 45 through column 22, line 20).

Audebert discloses the authentication apparatus has means for authenticating the source and integrity of data received from the sender and further discloses using public-key encryption for secure communication (see column 23, lines 55 through column 24, line 22 and column 24, lines 23-64) that meets the recitation of wherein information encrypted by the public-key encryption method is sent from the information processing apparatus, forwarded to the authentication apparatus, decrypted using the private key corresponding to the user, so as to obtain decrypted information (see also column 21, lines 10-27 and lines 40-45 and column 25, lines 37-45); and discloses common key encryption method between the holding medium and the authentication apparatus that meets the recitation of wherein the decrypted information is encrypted means using the common key and wherein the obtained common key encrypted information is sent back

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to the data holding medium (see column 24, lines 40-45). **Audebert** discloses a secure downloading in another embodiment wherein authentication apparatus performing processing using the private key corresponding to the user, this process of loading is performed upon assuring the integrity of the source and the user that requires an additional authentication request (see column 23, line 25 through column 24, line 38). **Audebert** clearly discloses the scope of the claimed invention as claimed and further suggests encrypting all data exchange between the modules (see column 24, lines 55-61) and further states encryption and signature mechanisms may be performed by any cryptographic techniques as known in the art (see column 12, lines 26-35). Although the steps are not explicitly disclosed with the exact orders as claimed, it would only require routine skill in the art to write the steps of the claimed invention using the encryption and authentication methods exchanged between the authentication apparatus, the holding medium, and information processing apparatus and the suggestions disclosed by **Audebert**. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have information processing apparatus encrypting data and forwarding it for verification to the authentication apparatus since **Audebert** suggests that the holding medium does not have the cryptographic capabilities for signature, that the authentication apparatus contains (column 21, lines 10-26) and if data is verified sending it to the holding medium as suggested by **Audebert** (columns 23-24). One of ordinary skill in the art would have been motivated to do so as suggested by **Audebert** in order to perform a secure downloading of information into the medium that includes mutual authentication of all the modules involved (see column 23, lines 1-27).

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Claim 14 recites the similar limitations as claim 13 except for using implementing the claimed method of claim 13 in an authentication apparatus. Therefore claim 13 is rejected on the same rationale as the rejection of claim 13 and claim 1 (for also disclosing an authentication apparatus).

As per claim 15, **Audebert** discloses wherein the authentication apparatus has a private key used in a public-key encryption method, (see column 21, line 45 through column 22, line 20).

As per claim 17, **Audebert** discloses wherein the information processing apparatus has a reader and writer function for reading and writing the IC card (see column 12, line 56 through column 13, line 11).

As per claim 20, **Audebert** discloses wherein the information processing apparatus has a communication function, a browser function for accessing information on the Internet (see column 12, line 56 through column 13, line 11).

Claims 21, 22 and 23 disclose similar limitations as the rejected claim 1 and are therefore rejected on the same rationale as the rejection of claim 1.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5.1 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl Colin whose telephone number is 571-272-3862. The examiner can normally be reached on Monday through Thursday, 8:00-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser G. Moazzami can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

cc

Carl Colin

Patent Examiner

January 3, 2007

NASSER MOAZZAMI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

[Signature]
1,4107